

Abstract

A method for producing a micromechanical component, preferably for fluidic applications having cavities, is described. The component is constructed from two functional layers, the two functional layers being patterned differently using micromechanical methods. A first etch stop layer having a first pattern is applied to a base plate. A first functional layer is applied to the first etch stop layer and to the first contact surfaces of the base plate. A second etch stop layer, having a second pattern, is applied to first functional layer. A second functional layer is applied to the second etch stop layer and to the second contact surfaces of the first functional layer. An etching mask is applied to the second functional layer. The second and the first functional layer are patterned as sacrificial layers by the use of the first and the second etch stop layer by etching methods and/or by using the first and the second etch stop layer. By supplementing patterning of the base plate, additional movable fluidic elements may be implemented, using the method. The method is preferably used for producing a micropump having an epitactic polysilicon layer as the pump diaphragm.

Figure 1